

Appln. No. 09/865,368
Response dated Jan. 30, 2006
Reply to Office Action of Sep. 29, 2005
Docket No. 6169-202

IBM Docket No. BOC9-2000-0066

REMARKS/ARGUMENTS

These remarks are made in response to the Final Office Action of September 29, 2005 (Office Action). As this response is within the 3-month shortened statutory period, no extension fees are believed to be due.

Claims 1, 3-5, 7-11, 13-21, 24, 26-28, 30-34, 36-44, and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,261,044 to Dev, *et al.* (hereinafter Dev), U.S. Patent No. 6,546,263 to Petty, *et al.* (hereinafter Petty), and U.S. Patent No. 6,046,742 to Chari, *et al.* (hereinafter Chari). Claim 23 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,225,999 to Jain, *et al.* (hereinafter Jain), Petty, and Chari.

Applicants have amended independent Claims 1, 10, 19, 23, 24, 33, and 42 to emphasize certain additional aspects of Applicants' invention. As discussed herein, the claim amendments are fully support throughout the Specification. (See, e.g., Specification, p. 12, lines 16-18; p. 13, lines 5-8; p. 14, lines 3-8; p. 15, lines 1-9; and p. 17, lines 4-22.) No new matter has been introduced by virtue of the claim amendments.

Applicants' Invention

It may be useful to reiterate certain aspects of Applicants' invention prior to addressing the references cited in the Office Action. One embodiment of the invention, typified by independent Claim 1, as amended, is a method for monitoring and visualizing a plurality of metrics in a dynamic data space. The method can include defining metrics that each correspond to one or more entities in the dynamic data space. Each entity, moreover, can correspond to a network component.

The method further can include defining a maximum and a minimum value for each of the metrics, and quantizing discrete levels between the defined maximum and minimum values. Additionally, the method can include assigning a unique indicator to

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each of the discrete, quantized levels and determining a value for each of the defined metrics. For each determined value, a unique indicator can be determined, according to the method. Further, according to the method, a user selection can be received via a graphical user interface, each user selection being a selection of a particular one of the entities.

The method can further entail providing graphical display representations of the unique indicators associated with the selected entities, the representations being presented within a graphical user interface of a machine remotely located from the at least one entity. The graphical user interface can change to reflect changes to the selected entities. The graphical user interface also can simultaneously display four distinct sections, the different sections configured, respectively, as a node map section, a node detail section, a map view section, and a reset section. (See, e.g., Specification, p. 13, lines 5-8.)

The method also can include displaying in the node map section a plurality of icons in conjunction with the unique indicators. (See, e.g., Specification, p. 15, lines 10-14.) Each icon can correspond to a network component and indicate the physical type of the corresponding network component. The method also can include displaying in the node map section links connecting at least of one the icons to at least one other icon. Each link can illustrate a relative communication relationship between the different linked network components. (See, e.g., Specification, p. 14, lines 5-8.)

The method further can include simultaneously displaying in the node detail section information pertaining to each of the selected entities, and simultaneously displaying in the map view section a list of user-selectable metrics from which a user a user can select different metrics for display in the aforementioned node map section. (See, e.g., Specification, p.14, lines 9-12.). The method also can include simultaneously displaying in the reset section a selectable list of all entities and network components. According to the method, the selection of at least one entry of the selectable list can provide a reset function that allows a user to initialize one or more metric values.

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Additionally, or alternatively, the reset function can allow a user to set a default value for at least of one of the defined metrics.

The Claims, As Amended, Define Over The Cited References

Claims 1, 3-5

As already noted, independent Claims 1, 10, 24, 33, and 42 were each rejected as unpatentable over the combination of Dev, Petty, and Chari. Applicants respectfully submit that, even when combined, the cited references fail to teach or suggest every feature recited in independent Claims 1, 10, 24, 33, and 42, as amended.

None of the references teach or suggest, for example, presenting unique indicators indicating quantized metric values associated with network components in a display comprising four distinct sections. Although each reference discloses presenting different levels of metric monitoring in separate displays, only Dev teaches the simultaneous presentment of different-level metric measures in three different separate sections of the same display, while Chari provides a display of only two separate sections. (See Dev, FIG. 10, and Chari, FIGS. 14-39.) More fundamentally, none of the references teaches presenting metric representations in a display comprising a node map section, a node detail section, a map view section, and a reset section that each have the various attributes recited in each of the amended independent claims.

Dev is directed to a network management system whereby network components are presented along with information relating to the various components in a graphical display. (See, e.g., Col. 2, lines 47-64.) In one of the displays provided by Dev, a specific network component is presented along with an "alarm log" and "information pertaining to a selected alarm." (Col. 15, lines 43-48.) To obtain information specific to one of the listed alarms, however, a user must view a new display. (Col. 48-50.) Chari is similarly directed to a method for organizing and displaying information regarding network components, but explicitly organizes the operational parameters "into a plurality

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of hierarchical levels." The operational parameters are not presented in a single display, but rather in a sequence of displays based on the plurality of hierarchies. (Col. 4, lines 42-59; see also Abstract and FIGS. 14-39.) Petty is limited to the presentment of operating parameters for a mobile phone, the parameters being presented "by means of a rotating-icon" that presents a series of displays on a screen embedded in the mobile phone. (Col 1, lines 38-48; See also Abstract.)

None of the references, alone or in combination, teaches or suggests displaying simultaneously along with three other screen sections a node map section. Specifically, none of the references provides a simultaneous display wherein the node map section displays icons in conjunction with unique indicators such that each icon corresponds to a network component indicating a physical type of the corresponding network component, as recited in each of the amended independent claims. Nor do any of the references teach displaying links connecting at least of one icon to at least one other icon, wherein each link indicates a relative communication relationship between linked network components, as recited in amended Claims 1, 10, 24, and 33.

Dev displays a network's "topology" comprising separate network components, but not as icons that are uniquely configured to indicate the physical type of the particular network components. Instead, each icon in Dev requires an additional textual legend imposed on each icon to indicate the physical type of the network component represented by an icon. (See FIGS. 8A and 8B.) Chari displays a plurality of icons representing different network components but shows no typological relation among them nor any links connecting them to indicate a relative communication relationship. Petty does not provide a display of different network components.

Moreover, none of the references teach or suggest simultaneously displaying along with a node map section a distinct node detail section that presents information pertaining to a selected network component or entity, as further recited in each of the amended claims. Only Chari presents information related to network components, the presentment

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being of a single network component in a separate section. (See FIGS. 14-39.) As already noted, however, Chari's information is only with respect to the single component and it is presented simultaneously only with a hierarchical listing of other network components. More particularly, Chari does not present the information simultaneously along with a node map section, as already described, or either of the two other display sections provided with Applicants' invention.

None of the references, moreover, present simultaneously in the same display a map view section that provides a list of user-selectable metrics for allowing a user to select different metrics for display in a separate, simultaneously displayed node map section. The hierarchical listing that Chari presents does not afford a user an opportunity to select different metrics to be simultaneously presented in a separate node map section. The hierarchical listing in Chari provides only a listing of other components, not different metrics. To view a different metric for a particular network component, Chari requires that a user select from the hierarchical list a different level view that is subsequently presented in a separate display.

Lastly, none of the references simultaneously display along with three other sections a separate reset section. Moreover, none of the displays of any of the references cited provides a reset section, either displayed individually or in conjunction with even one other section, as recited in each of the amended independent claims. Specifically, none of the references provide a graphical user interface display that presents a selectable list of all entities and network components whereby the selection from the selectable list provides a reset function. As expressly recited, Applicants' reset function, as simultaneously presented along with the three other described display sections, allows a user to initialize a defined metric and/or to set a default value for a defined metric. None of the references, alone or in combination, provide this function.

Accordingly, whether read individually or in combination, the cited references, Dev, Petty, and Chari, each fail to teach or suggest every feature recited in amended

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independent Claims 1, 10, 19, 24, 33, and 42. Applicants respectfully submit, therefore, that each of independent Claims 1, 10, 19, 24, 33, and 42, as amended, defines over the prior art. Applicants further respectfully submit that whereas the remaining dependent claims each depends from one of these amended independent claims while reciting additional features, it follows that dependent Claims 3-5, 7-9, 11, 13-18, 20, 21, 26-28, 30-32, 34, 36-41, 43, 44, and 46 likewise define over the prior art.

Claim 23

Independent Claim 23 was rejected as unpatentable over Jain, Petty, and Chari. Jain is directed to a graphical user interface that permits a network manager "to select a limited number of network components for display in a topological map, along with pertinent information . . . while removing the display of undesirable or unnecessary data." (Col. 2, lines 42-47; see also Abstract.) None of the displays provided with Jain, however, include the features recited in independent Claim 23, as amended.

Jain, for example, does not provide a display that simultaneously presents four distinct sections. Specifically, Jain does not teach or suggest presenting in a graphical user interface a display that simultaneously includes a node map section, a node detail section, a map view section, and a reset section, as recited in independent Claim 23, as amended. Nor do any of the individual displays provided by Jain exhibit the various characteristics already described in connection with the node map section, the node detail section, the map view section, or the reset section that, according to Applicants' invention, are each presented simultaneously. Accordingly, Applicants respectfully assert that whereas these features are also not taught or suggested by either Petty or Chari, alone or in combination, amended independent Claim 23 also defines over the prior art.

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CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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